REMARKS

INTRODUCTION

In accordance with the foregoing, claims 1, 2, 4, 7, 9-12, 15, 17, 19, 22, 24-27, 30, and 33 have been amended. No new matter has been submitted.

Claims 1-39 are pending and under consideration.

Claims 7 and 22 have been indicated as including allowable subject matter, and have accordingly been amended into independent form. Further, claims 4, 11, 19, 26, and 33 have further been amended into independent form, without changing the same. Thus claims 4, 11, 19, 26, and 33 include the same breadth as originally filed.

REJECTION UNDER 35 USC 102(b)

Claims 1-2, 8, 9, 14-17, 23-24, 29-31, and 38-39 stand rejected under 35 USC 102(b) as being anticipated by Chaiken et al., U.S. Patent No. 6,757,838. This rejection is respectfully traversed.

First, it is briefly noted that Chaiken et al. is not a valid reference under 35 USC 102(b), as this application was filed before the publication the patent of Chaiken et al.

Regarding Chaiken et al., it is respectfully submitted that the two-BIOS method of Chaiken et al. is different from the currently claimed invention set forth in independent claims 1, 2, 9, 15, 17, 24, and 30, with differing scope and breadth.

Chaiken et al. sets forth a method of maintaining two stored BIOSs; one being modifiable (Main BIOS) and one being permanent (backup BIOS). ***During*** an initial booting of the backup BIOS, after a determination of how many retry attempts have been made of the Main BIOS, a validity of the Main BIOS is performed. See FIG. 4 of Chaiken et al. However, ***during*** the initial booting of the backup BIOS, if the Main BIOS is found to not be valid, then the backup BIOS used to ***finish*** the booting operation. If the Main BIOS is found to be valid then the Main BIOS is then used to finish the booting operation.

Chaiken et al. emphasizes the differences between prior art systems, having only modifiable Flash memory storing a BIOS, and the invention of Chaiken et al. having the backup BIOS be recorded in either a permanent medium or with permanence on a similar medium.

The Office Action appeared to interpret the original claim language very broadly to permit an interpretation that either of the Main BIOS or the backup BIOS of Chaiken et al. was

interpreted as reading on either of the first or second booting programs in the original independent claims. In addition, the Office Action further appeared to not give the claimed sequencing sufficient patentable weight, e.g., the sequencing between the determination of an error and the execution of a booting program.

Accordingly, to clarify the originally claimed invention and the inventor's original intent, applicants have clarified the sequencing of the error determination and the executing of the booting programs, e.g., the claimed error determination is performed before execution of the booting program.

Chaiken et al. implements a portion of the backup BIOS to perform the error determination of both the Main BIOS and the backup BIOS. See Chaiken et al. in col. 7, lines 10-24.

Conversely, embodiments of the present invention discuss that the error determination is performed, e.g., by a controller, before each respective booting program is executed.

Accordingly, for at least the above, it is respectfully submitted that Chaiken et al. fails at least to disclose the presently claimed invention of claims 1, 2, 9, 15, 17, 24, and 30. Claims depending from claims 1, 2, 9, 15, 17, 24, and 30 are equally patentably distinguishable from Chaiken et al.

Therefore, withdrawal of this rejection of claims 1-2, 8, 9, 14-17, 23-24, 29-31, and 38-39 is respectfully requested.

REJECTION UNDER 35 USC 102

Claims 3-6, 10-13, 18-21, 25-28, 32-33, and 34-37 stand rejected under 35 USC § 103(a) as being obvious over Chaiken et al., in view of Lin, U.S. Patent No. 6,892,323. This rejection is respectfully traversed.

Request for New Non-Final Office Action

In rejecting each pending claim under 35 USC 103, the Office Action would appear to only recited rejected claim numbers and where those additional features may be found in Lin, without setting forth in the record the Examiner's relied upon motivation for each proffered modification, which is a requirement to meet a prima facie obviousness case.

The Office Action, only briefly in paragraph 22, mentions that it would be obvious to combine features of Lin with Chaiken et al. "because they both teach methods for the

continuation of the booting process when incurring an error, by switching to a second/backup copy of the corrupted boot zone. Lin teaches of an apparatus, method or system wherein the corrupted boot zone can be replaced by another boot zone that contains no errors. This provides the ability to recover the corrupted bios and allow there to always be a good version of the bios to be available to switch to if needed."

However, this broad rationale for combining the two 'teachings' does not discuss the particular claimed features. Rather, the Office Action has argued that all teachings in Lin should be combinable with Chaiken et al. merely because they are related. In addition, here it is more particularly noted that the cited motivation for modifying Chaiken et al. merely restates what Chaiken et al. already accomplishes. Chaiken et al. already performs the replacing of a primary BIOS from a permanent backup BIOS when errors are detected in the primary BIOS.

Thus, without the Examiner's particular relied upon motivation, in the record, for each claim feature, applicants have not been provided sufficient notice of how or why the Examiner believes Chaiken et al. can or could be modified in view of Lin. Accordingly, it is respectfully submitted that these rejections are improper.

MPEP § 2142 states that the Examiner is required to present actual evidence and make particular findings related to the motivation to combine the teachings of the references. In re Kotzab, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000); In re Dembiczak, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Broad conclusory statements regarding the teaching of multiple references, standing alone, are not "evidence." Dembiczak, 50 USPQ2d at 1617. "'The factual inquiry whether to combine the references must be thorough and searching.'" In re Lee, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002) (citing McGinley v. Franklin Sports, Inc., 60 USPQ2d 1001, 1008 (Fed. Cir. 2001)). The factual inquiry must be based on objective evidence of record, and cannot be based on subjective belief and unknown authority. Id. at 1433-34. *The Examiner must explain the reasons that one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious. In re Rouffet, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998).*

Accordingly, for at least the above, applicants respectfully submit that the outstanding rejection rationales are improper and fail to meet a prima facie obviousness standard. In addition, as noted above, claims 4, 11, 19, 26, and 33 have further been amended into independent form and without amendments over their original form.

Accordingly, applicants respectfully request a new non-final Office Action with the aforementioned relied upon motivation, if the Examiner maintains the outstanding rejection of claims 4, 11, 19, 26, and 33.

Non-obviousness of modifying Chaiken et al.

First, similar to Chaiken et al., Lin likewise fails to disclose or suggest the sequencing of respective error detection before execution of the booting programs. The dependent claims, which must be interpreted in view of their respective independent claims, thereby include such sequencing.

In addition, it is noted that some rejection rationales would appear to be in conflict with each other. If the Main BIOS of Chaiken et al. or the primary BIOS of Lin are interpreted as either the first or second booting programs in either the independent claim or another dependent claim, then the same interpretation must be similarly applied in the currently interpreted dependent claims.

Thus, if one dependent claim sets forth that the first booting program may be replaced by a copy of the second booting program, then whichever BIOS arrangement (e.g., primary BIOS equaling the first booting program and the backup BIOS equaling the second booting program) has been interpreted, for that dependent claim, that arrangement must equally be applied to the other related dependent claims which, in an opposite manner, set forth that the second booting program may be replaced by a copy of the first booting program.

Here, this is important, since Chaiken et al. particularly sets forth that a primary aspect of the its invention is that the backup BIOS is permanent, i.e., it cannot be copied over. Thus, this is essentially a one-way arrangement, while the some of the related dependent claims must be interpreted as setting forth at least two one-way arrangements, in different directions.

For example, see dependent claims 18 and 20. Chaiken et al. cannot be interpreted as meeting both dependent claims.

Further, regarding these dependent claims and the newly made independent claims 4, 11, 19, 26, and 33, it is respectfully submitted that it would not have been obvious to modify Chaiken et al. to include the same.

Lin discloses a method of simplifying the error detection process by letting a primary BIOS run, and if the primary BIOS does not issue a confirmation signal before a delay signal is set, then the primary BIOS is found in error and the secondary BIOS is used. Here, because the primary BIOS will 'hang' if there are any errors, it will not be able to issue the confirmation signal

before a predetermined period of time expires, i.e., by not issuing this confirmation signal within this predetermined period of time the primary BIOS can be determined to be in error.

Thus, Lin discloses a method of simplifying error detection.

In Lin, there is no discussion of the secondary BIOS being stored in a permanent area of memory, as Lin leaves open the option of additional user determined BIOSs.

However, based upon the above discussion regarding the differences between related dependent claims, the Office Action must be making an argument that it would have been obvious to change Chaiken et al. to not use the permanent backup BIOS, but rather use a flashable BIOS.

However, as noted above, Chaiken et al. emphasizes the differences between prior art systems, having only modifiable Flash memory storing a BIOS, and the invention of Chaiken et al. having the backup BIOS be recorded in either a permanent medium or with permanence on a similar medium.

In particular, Chaiken et al. points out that "because a computer's system BIOS can be flashed or reflashed outside the factory, there is a need for a more robust recovery mechanism when the flash part is corrupted due to flashing an invalid BIOS, or when the flash process is interrupted before it completes." Chaiken et al. in col. 2, lines 30-36.

To provide this more robust recovery mechanism Chaiken et al. uses a secondary BIOS that is stored in a permanent memory that cannot be flashed.

Thus, this is a primary aspect of Chaiken et al.

However, as set forth in MPEP 2143.01, "if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious." Citing In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)(The court reversed the underlying rejection, holding the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate").

Thus, it would not have been obvious to modify Chaiken et al. as proffered in the Office Action.

In addition, the newly made independent claims 4, 11, 19, 26, and 33 similarly set forth that the "data stored in the first boot zone, which has no error, is used as a basis for the detection and correction of the error in the second boot zone." Here, the data from one boot zone must be used as a basis for error detection and correction in another boot zone.

The Office Action sets forth that Lin, in col. 8, lines 10-16, sets forth this "used as a basis for the detection and correction of the error."

At most, Lin sets forth copying a valid BIOS over an invalid BIOS. Chaiken et al. may similarly copy over an invalid BIOS with the permanent backup BIOS. Here, this may be arguably considered a correction, if they are the identical BIOS, as in Chaiken et al.

However, neither Chaiken et al. nor Lin discuss or suggest using that valid BIOS to detect errors in the alternate BIOS.

The cited portions of Lin merely discuss that during execution of a portion of the primary BIOS, code 404, the secondary BIOS may be found to be corrupt. This portion of the primary BIOS is a program/code determining whether the secondary BIOS is valid based upon the data of the secondary BIOS, e.g., through check-sums, etc. There is no comparison between the primary BIOS and the secondary BIOS.

Thus, in addition to the non-obviousness of modifying Chaiken et al. to having a non-permanent backup BIOS, it is respectfully submitted that Lin further fails to disclose or suggest all the claimed features of the pending claims.

Withdrawal of this rejection of claims 3-6, 10-13, 18-21, 25-28, 32-33, and 34-37 is respectfully requested.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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